

## STOP THAT SQUEAK WITH A LUBRICANT

Tighten Belts Here and There  
and Use Oil Freely.

By WILLIAM H. STEWART, JR.,  
President of the Stewart Automobile School.

"Squeak, squeak," said the car and again it said "squeak, squeak, squeak," while the driver pondered unmentionable thoughts. "This is one of the most annoying troubles while driving a car that is otherwise in good condition," says William H. Stewart, Jr., president of the Stewart Automobile School. "The squeak may not be anything serious or it may indicate a trouble which may grow to be dangerous. In any case it gives the sensitive motorist no rest until it is removed.

"If the noise occurs when you apply the brakes it is evidently in the brake bands, but other places are not so readily located. For instance, if the car squeaks when you go over water-bumps and other places, the trouble may be in the springs, the spring shackles, the mud guards, fenders, where the body rests on the frame, or a multitude of other places.

"But squeaks frequently occur in springs and spring shackles, particularly if neglected and allowed to run dry. In order to prevent this these parts should be greased over and thoroughly greased at frequent intervals. Jack up the frame to take the weight of the car off the springs. Spread the leaves apart, one by one, applying them with a cold chisel or a screw driver with a metal handle, using a medium weight hammer. The process will chip off some of the paint, but this is unavoidable. Now spread graphite-grease between the leaves, using a thin-bladed knife or a hack-saw blade. Use cylinder oil mixed with a little kerosene to reach in further than you can force the grease. This will frequently stop a squeak that cannot be reached by the grease alone.

"In rare cases the springs will have to be taken off and the leaves taken apart to give them a thorough oiling, particularly if they have been neglected for a year or more and have become badly rusted. There is a special tool on the market for spreading spring leaves. This may be used to advantage.

"Hoods and mudguards are frequent offenders. Inspect the strips of rawhide on which the hood rests. If these are broken or missing they must be replaced. Close down hood and see if it touches metal at any place. If it does a squeak is sure to develop. Stand on the spring hanger or the running board and shake the car up and down. This will cause the squeak to start, and it is then merely a matter of injecting oil into all places where metal or wood may rub together. If possible tighten the parts and eliminate the cause. An oil gun, with which a heavy oil may be injected with considerable pressure, is a great help in following the whole length of the mud guards, the bottom and sides of the hood, the hood fasteners, where running board and mud guards join, the radiator supports and every likely and unlikely place.

"If the brake band squeaks place a little, a very little, grease on drum in spots where end of brake bands join. This will be carried into the lining and help stop the squeak. But use very little, as grease is not noted for its tendency to make brakes hold.

"Keep at it and try again. Shake the car to draw the oil into the places mentioned, and go over the work again and again until success crowns your efforts."

### OFFERS DEMOUNTABLE TOPS.

Mitchell Company Has an Added Convenience for Owners.

"While we have as complete a line of closed car models as any company in the country," says President George Stove of the Mitchell Motor Car Company of New York, "our Racine factory has even gone a step further to provide winter protection of those who own our open passenger cars by building winter tops.

"The Mitchell idea of completeness is very strikingly emphasized by this perfected demountable top for the Mitchell touring car.

### A Page From Yesterday

THE first private garage constructed in New York city was built in the spring of 1900 by a prominent New York automobile enthusiast, who at that time owned three motor vehicles.

The Chinese looked with disfavor upon the early automobiles, fearing that their introduction into the land of tea would displace the porters, who were very numerous, from their jobs.

That even the early horseless carriage retained at least one characteristic of its honorable predecessor, the horse, is evinced by the following item written in 1908: "The claim advanced by the early pioneers that an automobile could not run away like a horse is being disproved by actual experience. Accounts of automobile runaways are not infrequent in the daily press."

In 1899 New York automobile laws allowed automobiles to travel not more than four miles around street corners.

Among the first great institutions of learning to officially recognize the motor car was Columbia University. In May, 1900, the faculty of that university announced a course in "Traction Engines and Carriages."

In discussing the relative merits of three and four wheel motor vehicles, an early automobile editor had this to say: "The three wheeler is not easy to steer, nor is it comfortable to ride in on any but the smoothest roads. When the average purchaser comes to lay out enough money to buy an automobile he soon concludes that he will be best pleased with a comfortable little four wheeler, which is easier to handle, safer and affords room for a companion by his side, and not tandem, as with the three wheeler."

In England during the early days of motor vehicles there was a decided preference for the name "motor house" rather than "garage."

That automobile speeding is not altogether a modern evil is proved by the following item of the date of September, 1909: "One of the most millionaire whose residence is in Newport, R. I., has been amusing himself, whenever the humor pleased him, by mounting his French racing machine and smashing records over the roads to Boston, to the consternation of the citizens and the discomfort of the authorities on route. It is useless to undertake to overtake his machine at full speed, so the police have been compelled to waylay the offender on his return journey, when, his thirst for breakneck speed having been for the moment sated, he is sauntering homeward at a more reasonable speed."

## Fulton Locomotor and Semi-Trailer



Much interest is being shown by New York business men in the automatically operated tractor and trailer. The value of a motor unit that hauls rather than carries loads is being generally recognized.

The Fulton locomotor and semi-trailer exhibited by the New York Fulton Truck Company at the recent truck show is being demonstrated daily by W. I. Fickling and Morris Mason with unusually interesting results. Many large corporations are being shown how "the six wheel truck" operates, and several orders already have been taken for immediate delivery.

The Fulton locomotor and trailer combination is built complete at the Fulton factory in Farmingdale, L. I. It is the only semi-trailer that is automatically operated from the driver's seat. Operation of the trailer brakes, the locking and the uncoupling are all taken care

of by the driver, who simply pulls a small lever and all three things are accomplished. Then the locomotor pulls away, leaving the trailer standing to be loaded or unloaded, and the locomotor is backed up to another trailer, coupled up in a second, and pulls away, all with little effort. The apparatus will haul five tons. It sells for \$3,900 complete.

What has particular interest to recent buyers is not only the comparatively low initial cost but the low upkeep expense and the remarkable facility with which the combination can move goods when two or three trailers are used with the locomotor. It has been demonstrated that one driver with a locomotor and three trailers can haul goods steadily all day without any idle moments for the power unit. Idleness and driving trucks empty or with only a small load are what make the operation of many trucks expensive.

## WOMEN WIN PLACES IN MOTOR INDUSTRY

Have Done So Well That They  
Will Retain Their  
Positions.

By FRANK F. TENNEY.

In the readjustment of the automotive industries which must come with the cessation of hostilities and the gradual return to normal conditions woman is likely to play a more important part than would have been admitted by the most sanguine feminist a few months ago. The war is, of course, responsible directly for this fact. The war drew from the factories and other branches of the industry thousands of skilled workmen. They were replaced by inexperienced and more or less indifferent men at first. But at length women were introduced after some experiments to find out if they would do.

The result? Well, I suppose all the men who come back will find places in the industry, but the women will not be replaced. They have won permanently; the men cannot crowd them out, because they are doing better work than

the men ever did—better work and more work.

Take the airplane industry. For some time there has been a loud call for women in the factories and we have been beseeched by certain builders of planes and motors to send them women mechanics; men or women waiters, but preferably women. It may be news to some that women play an important part in the production of the Liberty motors. These have a welded on water jacket, and the welding—oxyacetylene or electric process—is done by women. Why? They do it better and faster than the men.

The fact is that wherever in the manufacture there is a call for deftness and skill the women are distancing the men. Welding on the water jackets is not particularly heavy labor; but the work must be done in a perfect manner, and of course there has been a call to speed up the work, and the women responded in a way that surprised the factory superintendents. In all the large factories to-day the force consists of specialists who work on a forward system; that is, each workman or set of workmen does one thing, such as welding on the water jackets, boring a cylinder or finishing a valve seat, and then the job is sent on to the next workman or department, where some other part of the process is done. This makes each workman do one thing over and over, and in theory and generally

in practice the workman acquires a sort of super-efficiency because the work becomes more or less automatic. It is stereotyped work.

Does it surprise you that the women take to this sort of thing more than the men? Factory experience shows that the man is fond of change; he doesn't like to keep doing one thing all the time. No matter what it is he has to do, he prefers something different. But a woman who can accomplish a piece of work and do it well is said to stick to it, to speed up and to do it better and quicker all the time. Possibly there is a reason for this. Man ever has been a creature of change. Men do not all do the same kind of work; they choose a vocation and probably will change several times. Woman ever has had one job, that of home keeper. She has gone through the routine of wash and bake and clean and sew for ages. She has eagerly given up her work in an office or store to be the household slave of a man. Ceaseless round becomes habit; she takes pride in excelling in her tasks.

In one of the Curtiss factories men were employed at splicing cables, and they were not turning out the work fast enough. Some men, you know, can be awfully busy and do nothing. After watching and studying the situation women were put at the work. In a little while, as soon as their hands had acquired proficiency, production was increased 200 per cent., the num-

ber of workers not being increased. The interesting thing about it is that the men themselves speeded up. You see, they put a woman in between two men at the benches; the latter were ashamed to let the women pile up stacks of finished work, which contrasted strongly with their own slacker production.

The natural question at this point is whether the women will be willing to remain in the factories doing what has been considered men's work. Yes, the woman who has to work for a livelihood

or who feels that she prefers factory to home work will stick to the job. Women, despite the fact that we refer to them as clinging vines, love to feel that they are independent. They are eager for equality. They have been glad during the war that they could have a part in it through their work. Witness the thousands and one ways in which even the society dames and belles have essayed to be of service. Then the fact that they can produce something gives an exaltation.

## A Captain of Industry

Bethlehem dominates the "Dependable Delivery" field for every kind of service—every kind of weather—on every kind of road; they are stout-hearted and strong of frame—the famous Bethlehem motors are their hearts, and the famous Bethlehem overload capacity chassis their frames.

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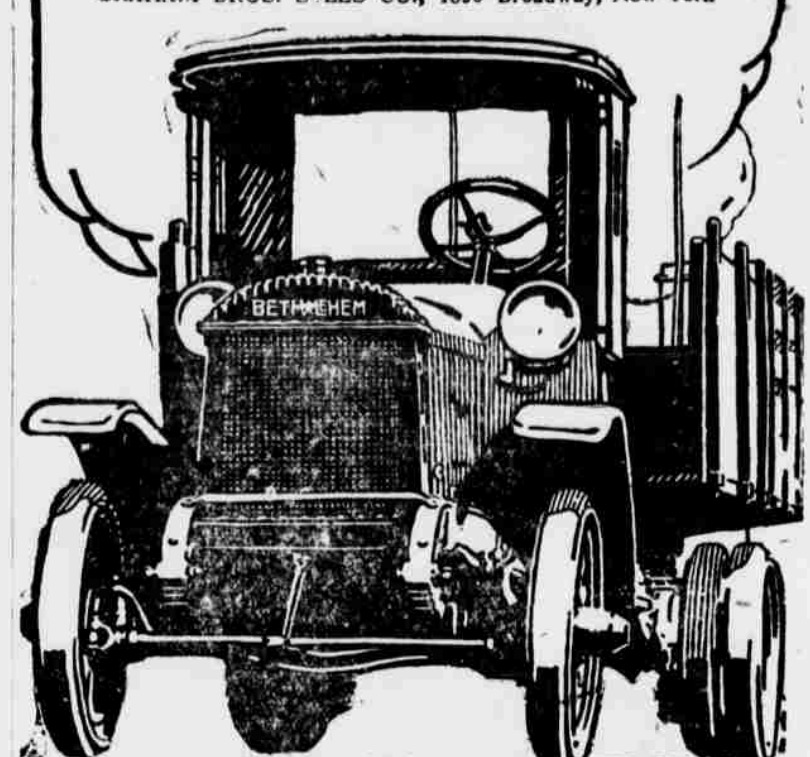
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**BETHLEHEM**  
Internal Gear Drive  
**MOTOR TRUCKS**  
Dependable Delivery  
BETHLEHEM MOTORS CORP., ALLENTOWN, PA.

### BROOKLYN'S AUTO SHOW.

Big Plans Under Way for Biggest Show.

Brooklyn dealers are planning to make their eighth annual automobile show, which is to be held in the Twenty-third Regiment Armory March 29 to April 12, the biggest ever held in Brooklyn.

Like the exhibition last year it will be a "double header," the first week, from March 29 to April 6, will be devoted entirely to passenger cars, while the second week, from April 8 to April 12, will be entirely for commercial vehicles. Accessories and parts will be exhibited at both sections of the show. Last year the Brooklyn Motor Vehicle Dealers Association staged the first commercial vehicle show held in Greater New York since 1913 and it was as big a success as the passenger car section. Judging by present indications the commercial vehicle section will be greater than ever before, for manufacturers and dealers realize the importance of Brooklyn as good selling territory. There will be everything to interest the business man and farmer, from the light delivery wagons to tractors.

Not only will Brooklyn dealers be represented but manufacturers and dealers from other cities have been allotted space. I. C. Kirkham, 1365 Bedford avenue, director of the show, says that practically all the space for both sections has been allotted, although there are yet several choice spaces to be had. The Brooklyn show comes at a time sufficiently long after the New York show to bring out new ideas in both passenger cars and trucks, particularly in details. The automobile manufacturers will have had an opportunity by the time the show is held to add to their product new ideas which were not seen at the Manhattan show.

### REVIVAL OF RACING LIKELY.

Harry Houpst Says It Will Help Manufacturers.

"Automobile racing, checked by the war, is due for a revival this summer. Many European makers in an effort to regain their position in the American market already are planning racing campaigns on speedways in this country," says Harry S. Houpst, president of the Hudson Motor Car Company of New York.

"This being true, would it not be a good idea for American makers to get together and adopt rules and conditions of the type and size of motors they wish to develop and not wait for the European makers to do this for them?"

European makers adopt certain rules and conditions, build cars to conform to them, test them out for a year, then come over here and our makers put out untested cars, designed in a hurry to meet these conditions and are beaten by the foreigners, not through any lack of merit of their cars, but due almost entirely to the fact that their cars are not tuned up properly.

"Let us decide on our own rules a year in advance of contests and let the foreigners build to meet our rules and play our own game instead of playing theirs."

"What I say is not inspired by anything the Hudson factory may do, as they will probably rest on their laurels. Hudson super sixes hold all speedway records for cars of their class and the world's transcontinental record. Hudson cars have amply proved their supreme endurance, reliability and speed not only in racing but in the hands of more than 60,000 owners."

### Export Expert



P. MATTHIESEN.

Reporting a wonderful outlook for automobile accessories in Denmark, Norway and Sweden, P. Matthiesen, who for the past six years has handled King 8 cars in the Scandinavian countries, arrived here last week to close big contracts for passenger cars, trucks and tires.

Mr. Matthiesen, who hails from Vejle, Denmark, is a well known manufacturer of stationary motors and marine engines and motors for concrete mixing machines and did some unusual work during the war for the Danish Government. He says that the Scandinavian countries at the present time are spending big sums for new highways and that the American automobile is in tremendous favor.

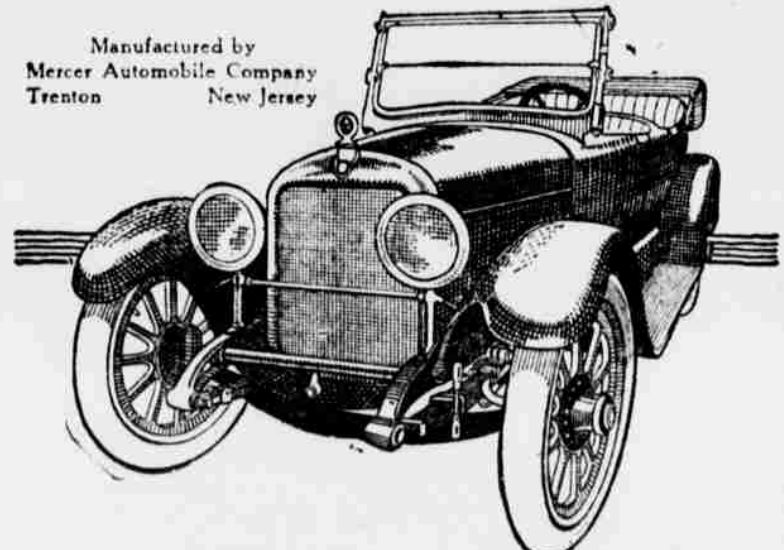


YOUR longing for a Mercer may now be fulfilled. You will enjoy its luxurious performance the more for having had to wait. The dependable might of its 73 horse-power, 4-cylinder engine; the charm and finesse of its design; the comfort and safety of its going throughout its vast range of speeds—these are once more available for those who prize this peace car.

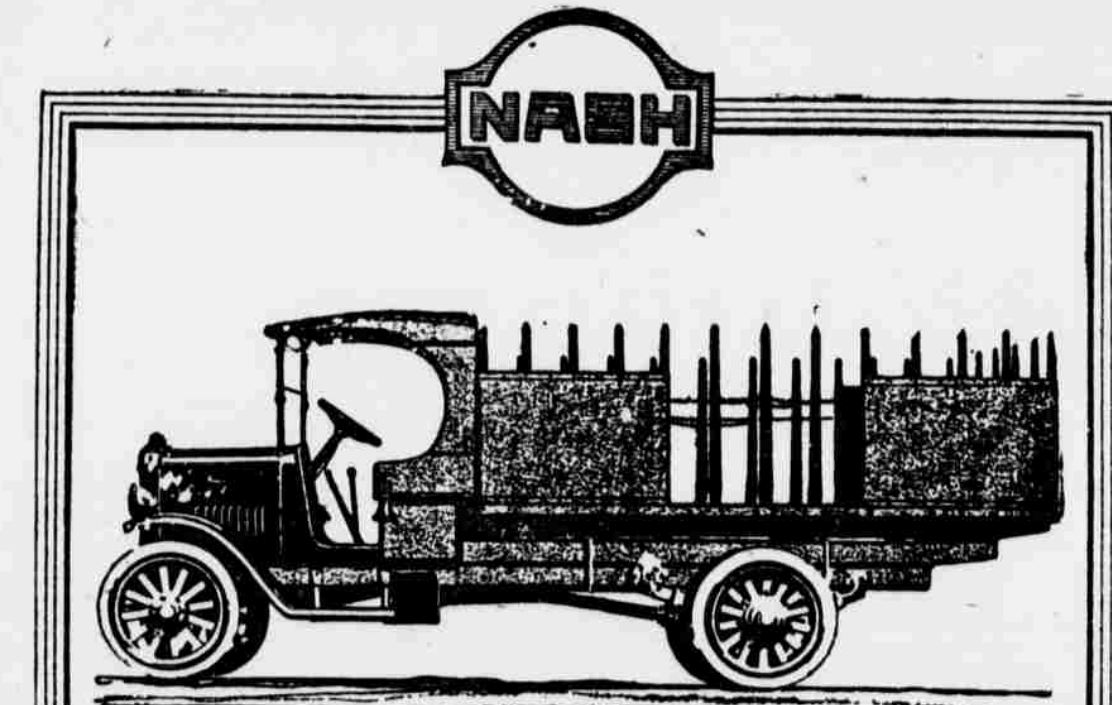
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